

## ABSTRACT OF THE DISCLOSURE

It is the purpose of the present invention to prevent a macroscopic defect in the production of an SiC single crystal. SiC source material powder and an SiC seed crystal are disposed inside a graphite crucible, and the SiC source material powder is thermally sublimated and recrystallized on a front surface of the SiC seed crystal to grow an SiC single crystal. In this sublimation-recrystallization method, a protection layer is provided on a back surface of the SiC seed crystal. The SiC seed crystal is mechanically supported by a supporting part disposed on the graphite crucible without bonding. Thereby, it is possible to improve the thermal maldistribution on the back surface of the SiC seed crystal and possible to suppress damage of the protection layer due to the thermal maldistribution. Thus, macroscopic defects in the grown SiC single crystal are preferably suppressed.